PEOSH NEWS

1999

Safety and Health Program Guidelines

By Raja Iglewicz
and Kathleen O'Leary

How Can You Reduce Your Illness and Injury Rates?

The New Jersey Department of Labor 1996 Occupational Safety and Health Survey found that New Jersey public sector workers experienced 47,000 job-related injuries and illnesses. About 44 percent of the reported cases involved at least one day lost from work.

Most of these incidents could have been prevented. In fact, experience has shown that a systematic approach to workplace safety and health can substantially reduce injuries, illnesses, and fatalities experienced by employees. The federal Occupational Safety and Health Administration (OSHA) has stated that effective safety and health programs can reduce injury and illness rates by 20 percent or more and yield a return of four to six dollars for every dollar invested in this type of program.

With significant participation from the Public Employees Occupational Safety and Health (PEOSH) Advisory Board, the New Jersey Department of Health and Senior Services (NJDHSS) and the

Mt. Laurel Township MUA Safety & Health Meeting.

New Jersey Department of Labor (NJDOL) PEOSH Programs have developed *Guidelines for Occupational Safety and Health Programs***.** These guidelines are based on a draft standard for safety and health programs that federal OSHA is developing. And very similar to this draft standard, the PEOSH Program Guidelines stress management commitment and employee

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In This Issue:

NEW JERSEY DEPARTMENT of HEALTH and SENIOR SERVICES

Christine Todd Whitman, Governor

Len Fishman, Commissioner

Rutgers University's Successful Safety and Health Program

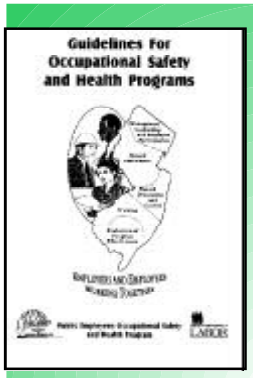
By Sylvia Wittenberg

The Rutgers University Mason Gross School of Arts (MGSA) is housed in downtown New Brunswick in the Civic Square Building. This building was constructed in 1995 and was designed to house a variety of visual art programs including painting, printmaking, photography, and paper making. From the time the building was occupied, Rutgers Environmental Health and Safety Department (REHS) received periodic complaints regarding inadequate ventilation and poor indoor air quality. Occupants complained of stuffiness, odors and health symptoms, including: headaches, dry eyes, sinusitis and sore throats.

(Continued on page 3)

(Safety & Health Program Guidelines - continued from page 1)

For a free copy of the Guidelines call the NJDHSS PEOSH Program at (609) 984-1863 or the NJDOL PEOSH Program at (609) 633-3957 or visit the NJDHSS website at www.state.nj.us/health/eoh/peoshweb



Employees should be able to report problems without fear of reprisals and get reasonably quick responses.

involvement, work site analysis, hazard prevention and control and worker training.

These Guidelines recommend that employers develop a comprehensive safety and health program that will identify and control work site hazards and involve employees in all phases of the program. The Guidelines are easy to read and performance oriented. The emphasis is on results.

Basically, employers should encourage the development of a program that covers management leadership, employee participation, hazard assessment and control, training, recordkeeping and evaluation. The employer is asked to set up a program that systematically manages safety and health and is workplace specific. The smaller the employer, the simpler and more informal the program may be.

Employers would establish safety and health responsibilities throughout their organizations, provide the resources to meet those responsibilities and name at least one manager, supervisor or other person to receive reports about workplace safety and health conditions and to initiate appropriate corrective action. In other words, designate a responsible person who will be given authority to implement the right fixes.

The employees should be given opportunities for meaningful participation in all aspects of the safety and health program including establishing, implementing and reviewing the program. Employers should involve employees in the hazard assessment process, investigations, audits and procedure development and writing. It is essential that employees be able to report problems promptly without fear of reprisal, make recommendations and get reasonably quick responses.

To safeguard employee participation, employers should not discourage employees from making reports or recommendations concerning fatalities, injuries, illness or hazards in the workplace, or from otherwise participating in the employer's safety and health program.

It is essential that employers set up a system for identifying and controlling hazards by conducting inspections of the workplace; reviewing safety and health information; and investigating job-related deaths, injuries, illnesses and potentially hazardous incidents.

All employees need safety and health training. Topics should cover workplace specific hazards, hazard recognition, protective measures such as safety rules and personal protective equipment and which steps to follow in an emergency. It is essential that employers document the effectiveness of their programs and periodically check to make certain that their program is being followed.

The PEOSH Program will be helping employers and employees to implement these guidelines by issuing self-help guides and checklists and by offering on-site educational programs to explain these Guidelines.

Portions of this article were abstracted from The Synergist, April 1998, OSHA's Safety and Health Program Standard and used with permission.

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(Rutgers University - continued from page 1)

The ventilation system was checked, and the air flow balance adjusted as necessary. The building was flushed out for a seven day period, by adjusting the ventilation system to provide 100% outside air and 100% exhaust. To assess the adequacy of the ventilation system, carbon dioxide levels, temperature and humidity were measured in a number of areas, and found to be well within the American Society of Heating, Refrigeration and Air Conditioning Engineers' (ASHRAE) guidelines. REHS conducted area monitoring in a number of locations to measure airborne levels of volatile organic hydrocarbons, mineral spirits and formaldehyde. All levels measured were well below published indoor air quality guidelines. Finally, personal air monitoring for mineral spirits was conducted in the painting studios (where most of the complaints had originated). All levels measured were well below occupational exposure limits. Clearly, Rutgers was having difficulty identifying the source of the complaints.

In December, 1996, an employee filed a formal complaint alleging inadequate ventilation and building-related illnesses with the New Jersey Public Employees Occupational Safety and Health (PEOSH) Program. In response, the PEOSH Program inspected the Civic Square Building to assess the following:

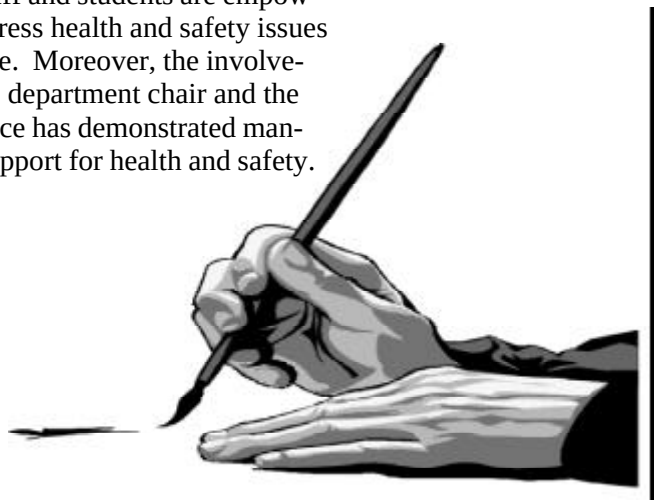
- *Adequacy of ventilation*
- *Use of chemicals*
- *Work practices.*

The PEOSH Program issued a number of recommendations including developing a written safety and health program, forming a labor/management committee and a safety-training program for art hazards.

All of these recommendations have been implemented. A health and safety committee was appointed, with representatives from management, faculty and the student body. This committee has developed specific policies and procedures for studio users, which address issues of chemical use, waste disposal and housekeeping. Health and safety training for all occupants was provided by a consultant specializing in art hazards. In addition, individuals in each area (i.e. photography, printmaking, painting) were designated to provide hands-on training to new users each semester. Studios are inspected regularly by the department chair and a member of the Dean's office. Problems that are identified are quickly addressed. Finally, an individual was identified to receive and monitor all health and safety complaints.

From: "Artist Beware", by Michael McCann, Ph.D., Watson-Guptill Publications

Since these initiatives have been implemented, health and safety complaints in the MGSA have greatly decreased. More significantly, there have been no complaints regarding indoor air quality. This is due largely to the effectiveness of the health and safety program in addressing selection and use of chemicals in the building. Faculty, staff and students are empowered to address health and safety issues as they arise. Moreover, the involvement of the department chair and the Dean's office has demonstrated management support for health and safety.



In summary, the PEOSH inspection, recommendations and subsequent training sessions proved helpful in several ways.

Rutgers believes that the Health and Safety program, and indeed all the occupants at MGSA have benefited from this experience.

Occupational Cancer Worries

By Lisa M. Roché, MPH, Ph.D.

Collecting Information

Did this ever happen at your workplace? Someone at work is diagnosed with cancer, then other employees start getting worried and inquire who else has been diagnosed with cancer. A perception may develop that there is an unusually large number of employees with cancer. People may suspect that a specific exposure or something at work is causing the cancer. How can these concerns be addressed?

First, it is important to understand some background information about cancer and occupational cancer. Cancers are a group of more than 100 diseases characterized by uncontrolled growth and spread of abnormal cells. Smoking, diet, alcohol use, reproductive factors, and family history are thought to be linked to cancer deaths. The estimated percent of cancer deaths due to occupational factors varies from less than four percent up to twenty percent or more.

Occupational cancers can be prevented.

However, many of the known and suspected chemical carcinogens were first identified in occupational settings. An early example was the discovery by Percival Pott in 1775 that chimney sweeps had a high rate of cancer of the scrotum also known as "soot-wart." A century later, other scientists found similar cancers in gas plant and oil shale workers. Forty years after that, the substances in soot, tar and oil that cause the cancers were identified as polycyclic aromatic hydrocarbons. Other examples among workers are: exposure to aromatic amines and bladder cancer; asbestos and mesothelioma and lung cancer; benzene and leukemia; arsenic and skin and lung cancer; bischloromethyl ether and lung cancer; and vinyl chloride and angiosarcoma of the liver. Fortunately, occupational cancers are mostly preventable through a combination of engineering controls, personal protective equipment and personal hygiene practices.

Most reported cancer clusters are not shown to be true clusters.

A cancer cluster is defined as a greater number of cancer cases than expected in a group of people, a geographic area, or a period of time. Most reported cancer clusters are not shown to be true clusters. Concerns among employees about cancer, a possible cancer cluster at work, and carcinogenic exposures should be addressed.

If you believe there is an inordinate number of cancer cases in your workplace, here are some steps to follow to find out if there is a workplace cancer cluster.

● Collect as much of the following information as possible: the type of cancer, date of diagnosis, age, gender, occupation, and years of employment of each person diagnosed with cancer; the type and size of the work unit. If there is direct exposure to a specific chemical or chemicals at work, use your workplace "Right to Know Hazardous Substance Survey to identify known or suspected carcinogens.

● Provide the above information to the PEOSH Program, (609) 984-1863, which will make an initial determination regarding the need for additional investigation.

● Consult with the PEOSH Program which may refer you to the Office of Cancer Epidemiology for assistance in determining if additional epidemiological investigation is needed. Whether or not additional epidemiological investigation is needed, informational materials will be sent to you on cancer and cancer clusters (e.g. Fact Sheet: Cancer and Cancer Clusters, and Fact Sheet: Occu-

pational Cancer and Response to Cancer Clusters at Work) and, if appropriate, on the specific types of cancer that employees are concerned about. If additional epidemiological investigation is necessary, the Office of Cancer Epidemiology will request your assistance.

● Another step may be requesting an industrial hygiene evaluation of the workplace, even if there appears to be nothing at the workplace causing the cancers. Employees often report a concern about cancer in conjunction with concerns about other health problems such as asthma attacks, respiratory symptoms, headaches, and nausea . Staff from the PEOSH Program can discuss an evaluation of the workplace with you and provide you with useful information.

● Sometimes employees are concerned about contamination of the workplace, e.g. contamination of the drinking water, air, or soil from a nearby waste disposal facility, junkyard, or a previous use of the worksite. Local public officials including the local health officer or local environmental agency or the New Jersey Department of Environmental Protection may have information on the suspected source of contamination and on whether or not the workplace could be contaminated, i.e., the pathways by which contaminants from the source may have reached the workplace. Generally, testing of the drinking water, air, or soil is not recommended unless there is reason to believe a specific carcinogen or hazardous substance is present.

For more information on occupational cancer, cancer clusters, and occupational carcinogens call the PEOSH Program at (609) 984-1863 or the Office of Cancer Epidemiology at (609) 588-3500.

Occupational Cancer

How many cases of cancer are there?

Cancer is common (one in three people in the U.S. will get cancer at some time in his/her lifetime) so it is expected that some people in a workplace will develop cancer.

Are the reported cancers of many different types?

If there are many different types of cancer, a single occupational cause is less likely than if there is one or only a few types.

Are the workers with cancer concentrated in a particular job title or location?

An occupational exposure is less likely to be the cause if the cancer cases are distributed among different job titles and locations.

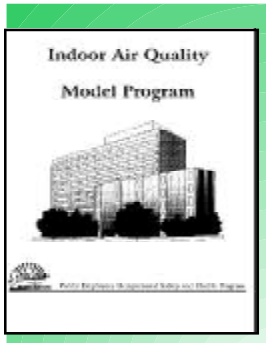
Were the workers with cancer employed in the job or at the worksite for at least ten years before the diagnosis of cancer?

Cancer usually takes ten to thirty years to develop after first exposure to the cancer-causing agent.

Generic Good Work Practices

- minimize employee exposure to hazards;
- use the Right To Know Hazardous Substance Survey to identify hazardous substances;
- remove hazardous substances from the workplace and substitute with less hazardous products.

Moldy Carpeting and other Indoor Air Quality Problems



Model IAQ Program available free from the PEOSH Program

The PEOSH Indoor Air Quality (IAQ) Standard, N.J.A.C. 12:100-13, covers public employees in the workplace. Useful IAQ information can be obtained from the PEOSH Program at (609) 984-1863 or visiting our Website at: http://www.state.nj.us/health/eoh/peoshweb/

By Carol Lamond

The PEOSH Program investigates many employee complaints of poor indoor air quality at public work-places. Here are some interesting case studies:

What happened on Tuesday mornings that was different from other workdays?

Public works employees complained of headaches and nausea while at work. When PEOSH staff questioned them for more details, the employees said that their symptoms were worse on Tuesday mornings. What happened on Tuesday mornings that was different from the other workdays? An investi-gation revealed that the facility's emergency generator was run every Tuesday for about thirty minutes and that the exhaust was not properly vented to the outdoors. When the appropriate ductwork was installed, the employees' health symptoms subsided.

Asthma-like symptoms in a Police Department

Police Department staff complained of an increased incidence of respiratory problems, particularly asthma-like symptoms. Several employees had begun to use inhalers to help them breathe more easily while at work. Large areas of microbial (e.g. mold, bacteria) growth were found on the walls in the below grade office areas and on the insulation lining the ventilation ductwork. Because of an extensive nearby outdoor excavation, water drainage had infiltrated the basement walls which lead to this microbial growth. Employees' symptoms dimin-ished after regrading the soil to divert the drainage water away from the building, decontaminating the basement walls with bleach and water solution, and replacing the ventilation ductwork.

My Grandson Smells like Gasoline

In addition to teachers' complaints of poor indoor air quality , a grandparent complained to the PEOSH Program that his grandchild's clothes smelled "like petroleum" when he came home from school. Upon visiting the school, the grandparent smelled the odor throughout the building. A PEOSH inspection found that the crawl space under the one-story building was wet and foul odors from microbial growth were entering the classrooms. The crawl space was dried out by a combination of regrading the property around the school, extending the rain spouts, repairing leaky pipes in the crawlspace, and opening crawlspace vents. Carpet-ing and other porous materials inside the classrooms that had been wet were also removed. Complaints of odors then subsided.

Preventing Firefighter Injuries

By Nancy Savage
and Eric Beckhusen

As part of a study funded by the National Institute for Occupational Safety and Health (NIOSH), staff of the New Jersey Department of Health and Senior Services, Occupational Disease and Injury Service conducted five investigations of non-fatal injuries of firefighters. The goal of this study was to prevent future injuries by studying and identifying the risk factors that contribute to firefighter injuries, by recommending intervention strategies, and by disseminating information to firefighters and safety and health professionals. Other NIOSH-funded states participating in the Firefighters Injury Project were California, Colorado, Missouri, and Wisconsin.

As part of this NIOSH study (with the assistance of the Department of Community Affairs, Division of Fire Safety) a poster was developed to encourage firefighters to use their SCBA.

Copies of these reports and the poster are available from the PEOSH Program.

Investigation Conclusions

Fire Departments should ensure that self-contained breathing apparatus (SCBA) is worn whenever firefighters are engaged in interior structural firefighting.

Firefighters should routinely be re-trained to be aware of the potential of encountering toxic materials in industrial materials.

Fire Departments should establish standard operating procedures for safely recharging pressurized water fire extinguishers.

Firefighters should be given supervised rest periods with appropriate frequency during fire fighting evolutions.

Adequate staffing should be maintained to ensure that supervised rest periods can be provided

SCBA should be used during overhaul operations.

All uncontrolled chemical releases should be treated as hazardous materials incidents.

Firefighters exposed to hazardous materials should receive immediate medical evaluations and, if necessary, treatment.

PEOSH News

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Results of the 1996 Occupational Safety and Health Survey: New Jersey Public Sector Data

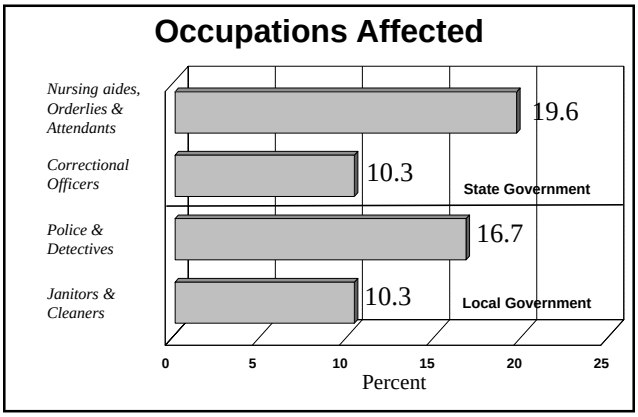
by the NJDOL Occupational Safety & Health Survey Staff

	Incidence Rate (cases per 100 full-time workers)		Number of Cases	
Government Sector	Total Cases	Case with days away from work	Total Cases	Cases with days away from work
State & Local	12.6	5.2	47,000	19,500
State	10.8	4.7	10,900	4,700
Local	13.2	5.4	36,100	14,800

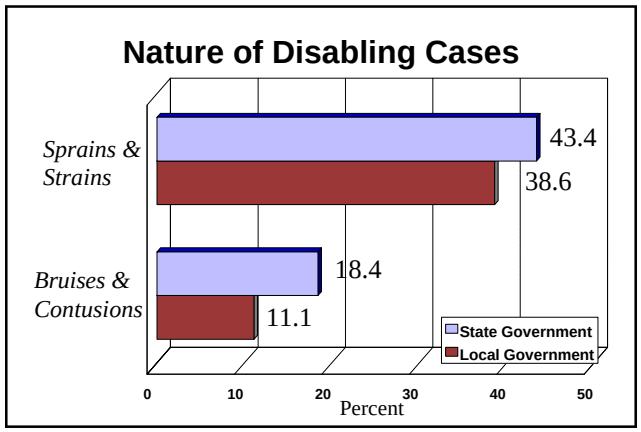
Nonfatal Occupational Injury and Illness Incidence Rates and Number of Cases by Sector, New Jersey, 1996

The results of the 1996 Occupational Safety and Health Survey revealed that workers in the New Jersey public sector sustained 47,000 job-related injuries and illnesses. Workers experienced injuries and illnesses at an incidence rate of 12.6 cases per 100 full–time workers. About 41 percent of the cases reported involved at least one day lost from work, an incidence rate of 5.2.

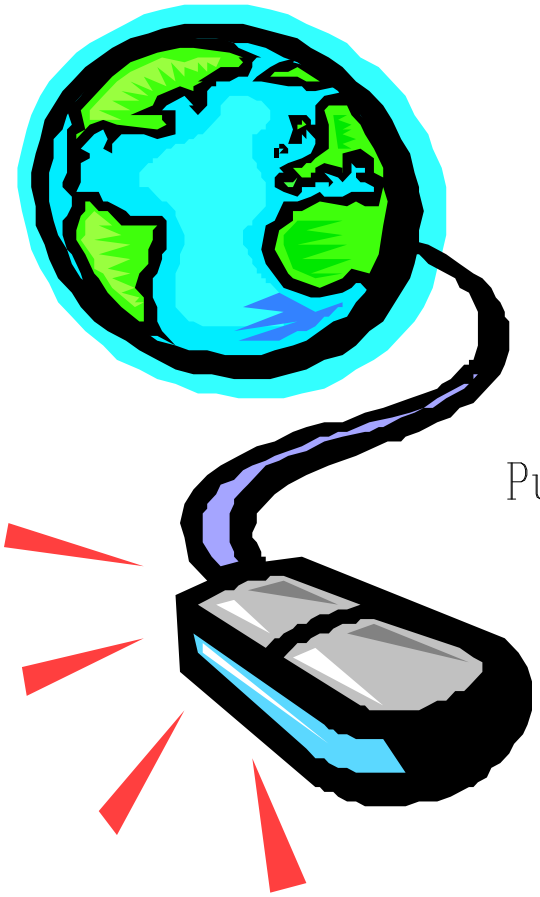
In state government, nursing aides, orderlies and attendants sustained about 20 percent of the disabling cases. In the local government, police officers accounted for nearly one of every six of the 14,800 disabling cases.



Sprains and strains accounted for almost half of the lost workday cases in state government and nearly 40 percent in local government. Combined with bruises and contusions, these two categories accounted for over two-thirds of the state government cases and one-half of those in local government. The trunk was the body part affected most frequently, involving about one-third of the cases reported, with the back cited in over two-thirds of these cases.



The annual survey of job-related injuries and illnesses is conducted by the Office of Labor Research and Analysis, New Jersey Department of Labor in cooperation with the U.S. Bureau of Labor Statistics. Additional information detailing cases by governmental function and occupation, as well as worker demographics and case characteristics, is available from the Division of Program Planning, Analysis and Evaluation, OSH Survey Section, P.O. Box 057, Trenton, New Jersey 08625, by fax at (609) 633-0618, or on the Internet at: http://www.wnjpin.state.nj.us/OneStopCareerCenter/LaborMarketInformation/lmilist.htm



PEOSH on the Web

Publications Include:

- Alert Bulletins
- Model Programs
- PEOSH Standards
- Information Bulletins

www.state.nj.us/health/eoh/peoshweb

Other Safety and Health Internet Sites

The PEOSH Program provides these information sources because the PEOSH Program believes they may be helpful and informative. The PEOSH Program is not responsible for the content of the information provided. Their appearance here should not be considered as an endorsement.

- American Academy of Physician Assistants in Occupational Medicine
  http://www.aapa.org/org/paom.htm
- American Association of Occupational Health Nurses
  http://www.aaohn.org
- American College of Occupational and Environmental Medicine (ACOEM)
  http://www.acoem.org
- American Conference of Governmental Industrial Hygienists
  http://www.acgih.org
- CDC (Centers For Disease Control and Prevention)
  http://www.cdc.gov
- US Department of Health and Human Services
  http://www.os.dhhs.gov
- American Public Health Association (APHA)
  http://www.apha.org
- American Red Cross
  http://www.redcross.org
- Agency for Toxic Substances and Disease Registry
  http://atsdr1.atsdr.cdc.gov8080/atsdrhome.html
- American Industrial Hygiene Association
  http://www.aiha.org/
- American Society of Safety Engineers
  http://www.ASSE.org/
- USDOL Mine Safety and Health Administration
  http://www.msha.gov
- National Institutes of Health
  http://www.nih.gov
- NIOSH (National Institute for Occupational Safety and Health)
  http://www.cdc.gov/niosh/homepage.html
- National Safety Council
  http://www.nsc.org
- OSHA (Occupational Safety and Health Administration)
  http://www.OSHA.gov